

Conductive Fluid Logging Sensor and Method

ABSTRACT

5 In a borehole logging tool, the flow of conductive fluid into or out of a wellbore
at the wellbore wall is detected and measured with a sensor loop proximate the borehole
inner wall. The sensor loop includes a series of contiguous sensors that act as
electromagnetic flowmeters and provide fluid measurements covering the entire
circumference of the sensor loop. The sensor loop includes an elastic element that
10 forces the sensor loop outward to maintain pressure along the sensor loop circumference
against the interior borehole wall. The sensor loop is designed to lie at a non-
perpendicular angle to the wellbore axis, and mechanical arms press the top and bottom
of the loop against the borehole inner wall.